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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/833,401	04/11/2001	Roman S. Ferber	HOME 0459 PUS	3432
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EXAMINER MATHEW, FENN C				
ART UNIT 3764				
PAPER NUMBER				
MAIL DATE 11/18/2009				
DELIVERY MODE PAPER				

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ROMAN S. FERBER and STEPHEN CHUNG

Appeal 2009-005180
Application 09/833,401
Technology Center 3700

Decided: November 18, 2009

Before: LINDA E. HORNER, STEFAN STAICOVICI and
KEN B. BARRETT, *Administrative Patent Judges*.

HORNER, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Roman S. Ferber et al. (Appellants) seek our review under 35 U.S.C. § 134 of the Examiner's final decision rejecting claims 1-25. We have jurisdiction under 35 U.S.C. § 6(b) (2002).

SUMMARY OF DECISION

We AFFIRM.

THE INVENTION

Appellants' claimed invention is an air bubble massage bathtub mat system. Spec. 1: 4-5. Claim 1, reproduced below, is representative of the subject matter on appeal.

1. An air bubble massage bathtub mat system for a bather in a tub comprising:
 - an air pump that provides a source of compressed air;
 - a mat having at least one air passage and a plurality of air outlet holes;
 - a hose connecting the air pump to the air passage in the mat;
 - a controller for controlling operation of the air pump; and
 - a remote control unit capable of communicating with the controller while the bather remains in the tub but not being physically connected to the controller and electrically isolated from the controller power supply.

THE EVIDENCE

The Examiner relies upon the following evidence:

Cook	US 3,045,254	Jul. 24, 1962
Stern	US 4,962,759	Oct. 16, 1990
Sandrin	US 5,050,591	Sep. 24, 1991
Haraga	US 5,245,714	Sep. 21, 1993
Barradas	US 5,588,161	Dec. 31, 1996
Lin	US 6,183,430 B1	Feb. 6, 2001

THE REJECTIONS

Appellants seek review of the following rejections by the Examiner:

1. Rejection of claims 1-7, 10, and 12 under 35 U.S.C. § 103(a) as unpatentable over Stern, Lin, and Haraga.
2. Rejection of claim 11 under 35 U.S.C. § 103(a) as unpatentable over Stern, Lin, Haraga, and Barrada.
3. Rejection of claim 1, 8, and 9 under 35 U.S.C. § 103(a) as unpatentable over Lin and Haraga.
4. Rejection of claims 12 and 13 under 35 U.S.C. § 103(a) as unpatentable over Lin, Haraga, and Sandrin.
5. Rejection of claim 14-25 under 35 U.S.C. § 103(a) as unpatentable over Sandrin and Cook.

ISSUES

Appellants argue claims 1-7, 10, and 12 as a group.¹ App. Br. 6-10. As such, we select claim 1 as the representative claim, and claims 2-7, 10, and 12 stand or fall with claim 1. 37 C.F.R. § 41.37(c)(1)(vii) (2009). Appellants argue Haraga is directed to a whirlpool, and as such is not analogous art to Stern and Lin, which relate to bath mats. App. Br. 6-9. The claimed invention, like Stern and Lin, relates to a bathtub mat system.

¹ The Examiner rejected claim 10 as unpatentable over Stern, Lin, and Haraga. Ans. 3; see also, Office Action dated June 16, 2005, page 2. While Appellants appealed claim 10 (App. Br. 2, *Status of Claims*), Appellants do not include claim 10 in the argument against this rejection (App. Br. 6), and Appellants present no separate argument for claim 10 (App. Br. *passim*). Based on this inconsistency in the Appeal Brief, we treat claim 10 as being appealed, but not separately argued, and we group claim 10 with claim 1.

The issue before us is:

Have Appellants shown the Examiner erred in rejecting claim 1 because Haraga is not analogous art?

Appellants argue that the rejection of claim 11, which depends from claim 1, is in error because Barrada fails to disclose that its remote control is electrically isolated from the controller of the portable foot bath as recited in claim 1. App. Br. 9. Appellants argue that the rejection of claims 12 and 13, which depend from claim 1, is in error because Sandrin likewise fails to disclose that the remote control is electrically isolated from the controller of the portable footbath as recited in claim 1. App. Br. 10.

The issue before us is:

Have Appellants shown the Examiner erred in the rejection of claims 11-13 because neither Barrada nor Sandrin discloses that the remote control is electrically isolated from the controller of the portable footbath as recited in claim 1?

Appellants argue claims 14-19 as a group. App. Br. 10-14. As such, we select claim 14 as the representative claim, and claims 15-19 stand or fall with claim 14. Appellants argue claims 20-25 as a group. App. Br. 10-14. As such, we select claim 20 as the representative claim, and claims 21-25 stand or fall with claim 20. 37 C.F.R. § 41.37(c)(1)(vii) (2009).

Appellants contend there is no motivation to combine Sandrin and Cook as proposed. App. Br. 10-14. More specifically, Appellants contend that Sandrin expressly teaches away from modifying its mat to include foam or flexible blocks by disclosing the drawbacks of rigid surfaces. App. Br. 14. Further, Appellants contend that the proposed modification of Sandrin would render Sandrin unsatisfactory for its intended purpose

because the addition of foam or flexible blocks would render the mat incapable of being filled with a fluid and then drained to roll up the mat.
App. Br. 13.

The issues before us are:

Have Appellants shown the Examiner erred in the rejection of claims 14 and 20 because Sandrin expressly teaches away from modifying the mat to include foam or flexible blocks?

Have Appellants shown the Examiner erred in the rejection of claims 14 and 20 because the proposed modification of the Sandrin would render Sandrin unsatisfactory for its intended purpose?

FINDINGS OF FACT

We find that the following enumerated facts are supported by at least a preponderance of the evidence. *Ethicon, Inc. v. Quigg*, 849 F.2d 1422, 1427 (Fed. Cir. 1988) (explaining the general evidentiary standard for proceedings before the Office).

1. Haraga discloses a whirlpool bath A with six nozzles in the bathtub body 1 in the shape of a box with an open upper surface. Haraga, col. 6, ll. 1-5; fig. 1. The device includes a controller C that controls the operation of a pump P that circulates hot water through a hot water circulation path D. Haraga, col. 6, ll. 27-31, 38-40; figs. 1, 3. Haraga discloses a remote controller 30 for operating the controller C of the whirlpool bath. Haraga, col. 19, l. 67 to col. 20, l. 2; figs. 1, 14.
2. Fixed (traditional) massage bathtubs and portable massage bath mats are in the same field of endeavor, as evidenced, for example,

by Lin describing that portable bathtub massage pads and fixed massage bathtubs are the two types of massage bathtubs on the market. Lin, col. 1, ll. 10-27.

3. Appellants' Specification describes a need for a convenient control for the air bubble massage bathtub mat system that minimizes potential shock hazard and eliminates the need for the bather to exit the bathtub to operate the pump and other controls. Spec. 1:22-2:5.
4. Haraga discloses the remote controller 30 enables the user to transmit instructions to the controller C. Haraga, col. 19, l. 67 to col. 20, l. 2; figs. 1, 14. The remote controller includes switches to adjust the level of output (hot water blow-off strength increasing and decreasing switches 268, 269). Haraga, col. 20, ll. 41-43; fig. 14. Haraga discloses the remote controller may be used while bathing (without exiting the tub). Haraga, col. 24, ll. 10-12.
5. Cook discloses a compressible bathtub liner that provides "yielding and non-slip protection and comfort for the user of the tub." Cook, col. 1, ll. 8-10, 15-16. Cook discloses liner 18 includes lower layer 64 is made of a compressible material such as foam rubber with a sufficient cross section and density to provide substantial cushioning for occupants without undue collapse. Cook, col. 2, ll. 26-34.
6. The Appellant's Specification does not provide a lexicographic definition of the phrase "flexible blocks" as used in the claims. Spec. *passim*.

7. The word “flexible” is commonly understood to mean “capable of being bent or flexed, pliable.” THE AMERICAN HERITAGE DICTIONARY (2d College ed. 1982) (“flexible,” adjective, definition 1a).
8. Sandrin discloses a water massage mat for a bathtub. Sandrin, col. 1, ll. 5-11; fig. 1. Sandrin discloses the mat is comprised of a rectangular cover 1 formed of two corresponding rectangular leaves, upper leaf 11 and lower leaf 12, that are welded along a perimetrical line 21. Sandrin, col. 2, ll. 64 to col. 3, ll. 2. Within the rectangular cover 1 are additional welds to divide the mat into a first channel 31 and a second channel 32. Sandrin, col. 3, ll. 14-15, 33-42. First hermetically sealed channel 31 contains water, air, or a combination of the two, and is filled and drained through port 7. Sandrin, col. 4, ll. 8-11; figs. 1, 4. Second channel 32 is filled with compressed air provided through feeder conduit 4, and the compressed air exits second channel 32 through small holes 5. Sandrin, col. 3, ll. 5-10, 45-47; fig. 1. Once filled, sealed channel 31 transforms the mat into a “proper soft mattress,” supporting the body of the user so that the user will not interfere with the operation of small holes 5. Sandrin, col. 3, ll. 56-60; col. 4, ll. 62-64; figs. 1, 4.
9. Sandrin discloses that in the prior art, the use of rigid surfaces in bathmats caused localized pressures against the user’s body, resulting in an unpleasant effect. Sandrin, col. 1, ll. 41-45.
10. The Appellant presents no persuasive argument or evidence that modifying Sandrin to use the foam of Cook in sealed channel 31 in

place of fluid would have been beyond the skill of a person of ordinary skill in the art. App. Br. *passim*.

PRINCIPLES OF LAW

“The analogous-art test requires that the Board show that a reference is either in the field of the applicant's endeavor or is reasonably pertinent to the problem with which the inventor was concerned in order to rely on that reference as a basis for rejection.” *In re Kahn*, 441 F.3d 977, 986-87 (Fed. Cir. 2006) (citing *In re Oetiker*, 977 F.2d 1443, 1447 (Fed. Cir. 1992)). The “field of endeavor” test asks if the structure and function of the prior art is such that it would be considered by a person of ordinary skill in the art because of the similarity to the structure and function of the claimed invention as disclosed in the application. *In re Bigio*, 381 F.3d 1320, 1325-27 (Fed. Cir. 2004).

“A reference is reasonably pertinent if, even though it may be in a different field from that of the inventor's endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem.” *In re Clay*, 966 F.2d 656, 659 (Fed. Cir. 1992). In other words, “familiar items may have obvious uses beyond their primary purposes.”

In re ICON Health and Fitness, Inc., 496 F.3d 1375, 1380-1 (Fed. Cir. 2007) (quoting *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 402 (2007)).

Whether a reference teaches away from a claimed invention is a question of fact. *In re Harris*, 409 F.3d 1339, 1341 (Fed. Cir. 2005). “A reference may be said to teach away when a person of ordinary skill, upon reading the reference would be led in a direction divergent from the path that was taken by the applicant.” *In re Haruna*, 249 F.3d 1327, 1335 (Fed. Cir.

2001). “[W]hen the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be nonobvious.” *KSR Int’l Co.*, 550 U.S. at 416 (citing *United States v. Adams*, 383 U.S. 39, 51-52 (1966)).

“Section 103 forbids issuance of a patent when ‘the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.’” *KSR Int’l Co.*, 550 U.S. at 406. The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, (3) the level of skill in the art, and (4) where in evidence, so-called secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). *See also KSR Int’l Co.*, 550 U.S. at 407 (“While the sequence of these questions might be reordered in any particular case, the [*Graham*] factors continue to define the inquiry that controls.”)

ANALYSIS

Rejection of claims 1-7, 10, and 12 under 35 U.S.C. § 103(a) as unpatentable over Stern, Lin, and Haraga

Contrary to Appellants’ assertion, the correct focus of the analogous art test is not whether the prior art references are analogous to each other. Rather, the correct focus is whether the references are analogous art to the claimed subject matter. *See In re Kahn*, 441 F.3d 977, 986-87 (Fed. Cir. 2006). Because Appellants have the burden of showing error in the

Examiner's rejection and have not asserted Haraga is nonanalogous art to the subject matter of claim 1, Appellants have failed to prove error by the Examiner. To the extent that one might interpret Appellants' argument that Haraga's whirlpool is not analogous art to Stern and Lin's bath mats as also asserting that Haraga is not analogous art to the claimed bathtub mat system, we analyze that assertion.

The Examiner found that Haraga's whirlpool is in the same field of endeavor as bathtub mat systems because they both relate to hydromassage apparatuses. Ans. 7. We analyze this finding by comparing the structure and function of the claimed system and Haraga's whirlpool. Claim 1 recites a "bathtub mat system for a bather in a tub" comprising a controller that controls the operation of an air pump that provides compressed air (fluid) via a hose to a mat with at least one air passage and a plurality of air outlet holes, and a remote control unit. Turning to Haraga, Haraga discloses a whirlpool system that includes a controller that controls a pump that circulates fluid via a connecting conduit of at least one passage and a plurality of outlet holes, and a remote control unit (Fact 1).

Regarding structure, both the claimed system and Haraga's whirlpool include a controller, a pump, a conduit from the pump to a plurality of outlet holes, and a remote controller. Further, Haraga's device includes a tub and the claimed device operates within a tub, so that each device operates in a like structure. Regarding function, each controller controls the pump, each pump moves fluid through a conduit to the outlet holes, and each can be operated by a remote controller. Given these similarities, we find that Haraga and the subject matter of claim 1 are in the same field of endeavor, so that Haraga is analogous art to Appellants' claimed bathtub mat system.

Further supporting this conclusion, it was known in the art that fixed massage bathtubs (e.g., a whirlpool such as Haraga) and portable massage bathtub mat systems (e.g., the claimed device) are in the same field of endeavor (Fact 2).

While we agree with Appellants' assertion that whirlpools are generally larger, "non-removable," and have more complex and different electrical operations as compared to bath mats, these distinctions are less significant than the strong similarity of structure and function of whirlpools and bathmat, discussed *supra*, and these distinctions do not alter our conclusion that the two systems are in the same field of endeavor. See App. Br. 8.

In addition to being in the same field of endeavor, we find a person of ordinary skill in the art would have considered Haraga because Haraga is reasonably pertinent to the problem facing Appellants. Appellants were concerned with devising a convenient control that permits the user to operate the pump and other functions from within the tub (Fact 3). The general problem facing Appellants at the time of the invention was to provide a safe and convenient form of control. *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) ("[T]he problem examined is not the specific problem solved by the invention but the general problem that confronted the inventor before the invention was made").

Haraga discloses a remote control device that permits a bather to operate the pump and other functions of the massage bathtub without exiting the tub (Fact 4). A person of ordinary skill in the art would have considered Haraga's remote controller for a whirlpool, which directly addresses the problem faced by Appellants. We decline to ignore this disclosure of

Haraga just because Haraga's device is larger, "non-removable," and has more complex and different electrical operations as compared to bath mats. See App. Br. 8.

We find that Haraga and the claimed system are in the same field of endeavor and that Haraga's remote controller is reasonably pertinent to the problem facing Appellants at the time of the invention. Based on this, Appellants have failed to demonstrate error in the Examiner's rejection of claim 1. Claims 2-7, 10, and 12 fall with claim 1.

Rejection of claim 11 under 35 U.S.C. § 103(a) as unpatentable over Stern, Lin, Haraga, and Barrada

We are unconvinced by Appellants' argument that the rejection of claim 11, which depends from claim 1, is in error because Barrada fails to disclose that the remote assembly 76 is electrically isolated from the controller of the portable footbath as recited in claim 1. App. Br. 9. As the Examiner points out, Barrada is used in the proposed combination for the disclosure of a recess to hold the remote control, not for the remote assembly itself. Ans. 4, 7. For that reason, Appellants have failed to address the proposed combination, and thus failed to demonstrate error by the Examiner in the rejection of claim 11.

Rejection of claim 1, 8, and 9 under 35 U.S.C. § 103(a) as unpatentable over Lin and Haraga

Appellants argue against the rejection of claims 1, 8, and 9 over Lin and Haraga by repeating the argument used against the rejection of claims 1-7, 10, and 12 under 35 U.S.C. § 103(a) as unpatentable over Stern, Lin, and

Haraga, namely, that Haraga is nonanalogous art. For the reasons explained in the analysis of the rejection of claim 1, *supra*, that argument is equally unpersuasive here.

Rejection of claims 12 and 13 U.S.C. § 103(a) as unpatentable over Lin, Haraga, and Sandrin

We are unconvinced by Appellants' argument that the rejection of claims 12 and 13, which depend from claim 1, is in error because Sandrin fails to disclose that the remote control is electrically isolated from the controller of the portable footbath as recited in claim 1. App. Br. 10. As the Examiner points out, Sandrin is used in the proposed combination for the disclosure of suction cups, not for the remote assembly itself. Ans. 5, 8. For that reason, Appellants have failed to address the proposed combination, and thus failed to demonstrate error by the Examiner in the rejection of claims 12 and 13.

Rejection of claim 14-25 under 35 U.S.C. § 103(a) as unpatentable over Sandrin and Cook

Claim 14

Independent claim 14 includes the limitation of having a plurality of "flexible blocks" secured between the layers. Appellants' Specification does not define "flexible," and the common understanding of the term is "capable or being bent or flexed, pliable" (Facts 6, 7). A person of ordinary skill in the art would then understand the "flexible blocks" of claim 14 to be blocks that are capable of being bent or flexed.

We are unconvinced by Appellants' argument that Sandrin expressly teaches away from modifying its mat to include flexible blocks by disclosing the drawbacks of rigid surfaces. App. Br. 14. The portion of Sandrin referred to by Appellants discloses that the use of rigid material causes localized pressures against the user's body, resulting in an unpleasant effect (Fact 9). See App. Br 14 (referring to Sandrin, col. 1, ll. 27-46). Cook discloses a compressible material such as foam that provides substantial cushioning and yielding comfort for occupants (Fact 5). A person of ordinary skill in the art would have recognized that Cook's compressible material is designed to provide comfort to users and avoids the pitfall of the prior art disclosed by Sandrin. Thus, Sandrin's disclosure regarding rigid materials would not have led a person of ordinary skill in a direction divergent from the path taken by Appellants, and does not teach away from a modification of Sandrin's mat with a compressible material such as that disclosed by Cook.

We are also unconvinced by Appellants' contention that modification of the Sandrin mat to include flexible blocks would render Sandrin unsatisfactory for its intended purpose of being capable of being drained to roll up the mat. App. Br. 13. The Examiner concluded that it would have been obvious to modify the bath mat of Sandrin to use Cook's foam in sealed channel 31 instead of fluid, and that Cook's foam would both provide adequate support, and permit the mat to be rolled up. Ans. 8. Appellants provide no persuasive argument or evidence that modifying Sandrin to use the foam of Cook in sealed channel 31 in place of fluid would have been beyond the skill of a person of ordinary skill in the art (Fact 10). We agree with the Examiner, and Appellants have not convinced us otherwise, that a

person of ordinary skill in the art would select foam that provides adequate support while not being so rigid as to prevent the mat from being rolled up. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007) ("A person of ordinary skill is also a person of ordinary creativity, not an automaton."). The use of Cook's foam in sealed channel 31 of Sandrin's device would then provide the needed support and eliminate the need to fill channel 31 with fluid while still permitting the mat to be rolled up, so that Sandrin's modified device remains satisfactory for its intended purpose.

Appellants have failed to demonstrate the Examiner erred in the rejection of claim 14. Claims 15-19 fall with claim 14.

Claim 20

Independent claim 20 includes the limitation of having at least one "foam member" sealed between the layers.

We are unconvinced by Appellants' argument that Sandrin expressly teaches away from a combination with Cook by disclosing the drawbacks of rigid surfaces. App. Br. 14. We see no distinction between claim 20 and claim 14 warranting a change in our analysis of this argument under claim 14, *supra*. Likewise, we are also unconvinced by Appellants contention that modification of the Sandrin device to meet the limitations of claim 20 would render Sandrin unsatisfactory for its intended purpose for the reasons explained in the analysis of claim 14, *supra*. See App. Br. 13.

Appellants have failed to demonstrate the Examiner erred in the rejection of claim 20. Claims 21-25 fall with claim 20.

CONCLUSION

Appellants have failed to show the Examiner erred in rejecting claim 1 because Haraga is analogous art.

Appellants have failed to show the Examiner erred in the rejection of claims 11-13 because neither Barrada nor Sandrin discloses that the remote control unit is electrically isolated from the controller of the portable footbath.

Appellants have failed to show the Examiner erred in the rejection of claims 14 and 20 because Sandrin does not teaches away from modifying its mat with foam or flexible blocks and because the proposed modification of the Sandrin would not render Sandrin unsatisfactory for its intended purpose.

DECISION

We AFFIRM the decision of the Examiner to reject claims 1-25.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2007).

AFFIRMED

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